

**ABSTRACT**

A gaming machine uses mathematical modeling and graphical displays to provide players with realistic depictions of gaming activities for wagering. Three-dimensional mathematical models are used to simulate real-world interactions of physical objects, with a display showing the player a visual representation of the game interactions. By providing the player with a realistic depiction of real-world gaming activities, a gaming machine according to the present invention involves the player in the wagered-upon activity to a greater extent than traditional gaming machines.